EXHIBIT 23

QUINN EMANUEL URQUHART & SULLIVAN, LLP
Charles K. Verhoeven (Bar No. 170151)
charlesverhoeven@quinnemanuel.com
Melissa Baily (Bar No. 237649)
melissabaily@quinnemanuel.com
Lindsay Cooper (Bar No. 287125)
lindsaycooper@quinnemanuel.com
50 California Street, 22nd Floor
San Francisco, California 94111-4788
Telephone: (415) 875-6600
Facsimile: (415) 875-6700

Attorneys for GOOGLE LLC

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN FRANCISCO DIVISION

GOOGLE LLC,

Plaintiff

v.

SONOS, INC.,

Defendant.

CASE NO. 3:20-cv-06754-WHA

GOOGLE LLC'S PRELIMINARY CLAIM CONSTRUCTIONS AND EVIDENCE PURSUANT TO PATENT LOCAL RULE 4-2

Pursuant to Patent Local Rule 4-2 and the Court's Scheduling Order, Plaintiff Google, LLC ("Google") hereby provides its preliminary constructions for each term of the Patents-in-Suit proposed by the parties for claim construction, references from the specification and prosecution history that support Google's proposed constructions, and its designation of supporting extrinsic evidence. Accompanying this disclosure, Google is producing documents labeled with production numbers GOOG-SONOSNDCA-00056802 - GOOG-SONOSNDCA-00056943.

Prior to transfer, Sonos requested that the Texas court proceed with claim construction. At Sonos's request, the Texas court construed a number of the terms in the asserted patents. *See Sonos, Inc. v. Google LLC*, Case No. Case 6:20-cv-00881-ADA, W.D. Tex., August 10, 2021 Markman Hearing Transcript, Dkt. No. 106. Sonos requested the jurisdiction of the Texas court over Google's objection and received claim constructions that it should not be allowed to relitigate. Thus, in the instant case and in view of Sonos's litigation positions, the prior constructions and indefiniteness rulings provided by the Texas court continue to apply, and Sonos's attempts to re-litigate these constructions is improper. *Snyders Heart Valve LLC v. St. Jude Medical*, 2020 WL 1445835, *4 & *6-*7 (D. Minn. 2020) (adopting "the Texas court's prior constructions" because "under law-of-the-case/reconsideration principles, 'as a rule,' courts should be 'loathe' to revisit prior decisions of its own or of a coordinate court in the same case" unless the decisions were "clearly erroneous" or the parties "present new evidence."). By including these terms in the charts below, Google does not agree that the prior construction should be the subject of reconsideration. To the extent the Court permits Sonos to reconsider the prior claim construction order, Google reserves its right to supplement its claim construction positions with additional terms.

Google has not yet completed discovery, its investigation is ongoing, and it has not yet considered Defendant's proposed claim constructions and supporting material. Accordingly, Google provides this list based on its current knowledge and reserves the right to amend, modify, or supplement this list as necessary based on further discovery and understanding of Google's positions. For example, Google anticipates that this list may be modified after considering Defendant's proposed claim constructions and supporting evidence, participating in conferences

with Defendant regarding the same, and the parties' prospective efforts in preparing a Joint Claim Construction and Pre-Hearing Statement pursuant to Patent Local Rule 4-3. Google reserves the right to rely on any of the supporting material identified by Defendant, and to provide expert testimony for any terms that Sonos indicated it intends to provide expert testimony for. Google also reserves the right to modify this list based on other discovery in the matter and newly learned information.

[Proposed Constructions Follow]

U.S. Patent No. 10,779,033 ("the '033 patent")

Claim Term	By	Google Proposed Construction	Specification and Prosecution History[1]	Extrinsic Support
"playback device"[2]	Sonos	Plain and ordinary meaning; no construction necessary at this time	'033 at 2:8-19; 3:15-23; 3:36-39; 3:46-60; 4:40-48; 7:29-9:13; 12:16-27; 12:16-13:56; 15:47-53	• IEEE 100 *The Authoritative Dictionary of IEEE Standards Terms*, 7th Edition (2000) **playback** (1) A term used to denote reproduction of a recording. (EEC/PE) [119] (2) *See also:* reversible execution. (C) 610.12-1990 (3) To output data or text for review purposes. *Synonyms:* playout; printout. (C) 610.10-1994w • Dictionary of Multimedia Terms and Acronyms, 4th Edition (2005) **playback** (n.) The realization of recorded images or sound on any kind of audio or video equipment.
"data network"	Sonos	Plain and ordinary meaning; no construction necessary at this time	'033 at 1:22-24; 4:6-20; 5:20-65; 7:4-21; 7:44-57.	• McGraw-Hill Dictionary of Scientific and Technical Terms, Sixth Edition (2003) **analog data** [COMPUT SCI] Data represented in a continuous form, as contrasted with digital data having discrete values. { 'an·əl,äg 'dad·ə }

[1] For all of the asserted patents, where Google identifies a figure from the specification of a given patent-in-suit, it also identifies the associated text describing said figure and reserves the right to rely on it. Where Google identifies a portion of the specification referencing a figure, it also identifies the figure and reserves the right to rely on it.

[2] For terms already briefed in the Western District of Texas, Google reserves its rights to rely on any evidence or argument raised during the prior set of briefing.

data [COMPUT SCI] **1.** General term for numbers, letters, symbols, and analog quantities that serve as input for computer processing. **2.** Any representations of characters or analog quantities to which meaning, if not information, may be assigned. [SCI TECH] Numerical or qualitative values derived from scientific experiments. { 'dad·ə, 'dād·ə, *or* 'dăd·ə }

digital data [COMPUT SCI] Data that are electromagnetically stored in the form of discrete digits. { 'dij·əd·əl 'dad·ə }

packet [BIOL] A cluster of organisms in the form of a cube resulting from cell division in three planes. [COMMUN] A short section of data of fixed length that is transmitted as a unit. [PHYS] *See* wave packet. { 'pak·ət }

- Dictionary of Computer and Internet Terms, Ninth Edition (2006)

data information. The word was originally the plural of *datum*, which means "a single fact," but it is now often used as a collective singular. Data processing is the act of using data for making calculations or decisions. *Usage note:* This usage came and went.

- Hargrave's Communications Dictionary (2001)

data A representation of a collection of facts, concepts, instructions, or information to which meaning has been assigned. The representation may be analog, digital, or any symbolic form suitable for storage, communication, interpretation, or processing by human or automatic means.

"Data" is the plural of the Latin *datum*, meaning one item of information. To be correct, a single item should be called a datum and more than one should be called *data*, i.e., "one datum is . . ." and "two *data are* . . ."

network (1) A collection of generally passive, electronic components (e.g., resistors, capacitors, and inductors) interconnected in some way that performs a specific function; usually limited in scope (e.g., simulation of a transmission line or pulse shaping). (2) A collection of two or more autonomous information sources and sinks interconnected by one or more communication links. The components of a network include:

- Nodes (computers, printers, network interface cards[—NICs], etc.).
- Connection elements (cabling, wiring centers, optical fibers, switching systems, etc.).

The interconnecting link(s) may either be temporary (as with the dial-up telephone network) or permanent, such as with cables. The data passing through the interconnecting link is examined for errors, in contrast with a *multiprocessor system* wherein the data is accepted "at face value."

- Topology (physical and logical):
  - Physical topology describes how nodes are wired or interconnected. (Various topologies include the bus, ring, and star networks.)
  - Logical topology describes how network packets are treated. For example, a logical ring may be created on a physical star network by addressing a token packet sequentially to each node.
- Auxiliary components (peripheral devices, safety devices, and tools).
- Network operating system (NOS) and workstation software.

Networks are often classified according to their geographic extent or according to the transmission protocol used. Some examples of voice and/or data networks include the public switched telephone network (PSTN), integrated services digital network (ISDN), Ethernet (local area network), and the Internet (a world wide computer network). See also *network classifications*.

- Comprehensive Dictionary of Electrical Engineering, Second Edition (2005)

analog data data represented in a continuous form with respect to continuous time, as contrasted with digital data represented in a discrete (discontinuous) form in a sequence of time instant.

analog signal a signal represented in a continuous form with respect to continuous time, as contrasted with digital signal represented in a discrete (discontinuous) form in a sequence of time instant. *See also* analog data.

				local area network a network of computers and connection devices (such as switches and routers) that are located on a single site. The connections are direct cables (such as UTP or optical fiber) rather than telecommunication lines. The computer network in a university campus is typically a local area network. • Newton's Telecom Dictionary, Nineteenth Edition (2003) **Analog Signal** A signal in the form of a continuous wave varying in step with the actual transmitted information; attempts to transmit an exact replica of the inputted signal down a communications channel. See Analog and all the various definitions starting with Analog. **Data** This is AT&T Bell Labs' definition: "A representation of facts, concepts or instructions in a formalized manner, suitable for communication, interpretation or processing." Typically anything other than voice. **Digital Signal** A discontinuous signal. One whose state consists of discrete elements, representing very specific information. When viewed on an oscilloscope, a digital signal is "squared." This compares with an analog signal which typically looks more like a sine wave, i.e. curvy. Usually amplitude is represented at discrete time intervals with a digital value. • Modern Dictionary of Electronics, Seventh Edition (1999) **analog data** — 1. A physical representation of information such that the representation bears an exact relationship to the original information. The electrical signals on a telephone channel are an analog data representation of the original voice. 2. Data represented in a continuous form, as contrasted with digital data represented in a discrete (discontinuous) form. Analog data is usually represented by physical variables, such as voltage, resistance, rotation, etc.

				data — 1. A general term used to denote any or all numbers, letters, symbols, or facts that refer to or describe an object, idea, condition, situation, or other factors. It connotes basic elements of information that can be processed or produced by a computer. Sometimes *data* is considered to be expressible only in numerical form, but *information* is not so limited. 2. A general term for any type of information. 3. Inputs in the form of a character string that may have significance beyond their numerical meaning. 4. Any representations, such as characters or analog quantities, to which meaning might be assigned. **digital data** — 1. Data represented in discrete, discontinuous form, as contrasted with analog data represented in continuous form. Digital data is usually represented by means of coded characters (e.g., numbers, signs, symbols, etc.). 2. Any data that is expressed in digits. The term usually implies the use of binary digits. • Webster's New World Telecom Dictionary (2008) **packet** **1.** In the generic sense, referring to the manner in which data are organized into discrete units for transmission and switching through a data network. The data unit can be known as a block, frame, cell, or packet, depending on the protocol specifics. The packet comprises a header, payload, and sometimes a trailer, again depending on protocol specifics. The packet can be a user packet containing user data, or a signaling and control packet for various network monitoring, alerting and alarming, maintenance, and other administrative purposes. The payload can be a complete message, a fragment or segment of a message, or an aggregation of bits or bytes that form a short portion of a long data stream associated with a voice or video call. See also *bit*, *block*, *byte*, *cell*, *data stream*, *fragment*, *frame*, *header*, *message*, *payload*, *protocol*, *segment*, and *trailer*. **2.** In a technology-specific sense, a packet is a data unit in an internetwork, such as the Internet or other packet-switched network in which routers interconnect networks and subnetworks to exchange traffic between nodes. In terms of the OSI Reference Model, a packet is defined in Layer 3, the Network Layer. Blocks, cells, and frames are defined in Layer 2, the Data Link Layer, and have local significance, only. See also *block*, *cell*, *datagram*, *Data Link Layer*, *frame*, *Internet*, *Network Layer*, *OSI Reference Model*, *packet switch*, and *router*. • Webster's New World Computer Dictionary, 10th Edition (2003)

				packet In networking, a unit of data of a fixed size—not exceeding the network's maximum transmission unit (MTU) size—that has been prepared for transmission over a packet-switching network. Each packet contains a header that indicates its origin and its destination. Synonymous with datagram. See *packet-switching network*. • Packet Broadband Network Handbook, McGraw-Hill (2004), (excerpts) **8.1 Introduction** A local area network is a high-speed data network that covers a relatively small geographic area. It typically connects workstations, personal computers, printers, servers, and other end-user devices, which are collectively also known as *data terminal equipment*. The common applications of LAN include shared access to devices and applications, file exchange between connected users, and communication between users via electronic mail and others. LANs are also private data networks, because they belong to an organization and are used to carry data traffic as opposed to voice traffic. This section provides a brief introduction to LAN history, standards, protocol stacks, topologies, and devices. **8.1.1 LAN History and Standards** LAN is a type of broadband packet access network that carries the packet data traffic of an organization. LAN interconnects the end users of an organization to an outside public data network such as the Internet. The basis of LAN technologies and standards was defined in the late 1970s and early 1980s. LAN technologies really emerged with the Internet itself, and the first widely deployed LAN technology, Ethernet, is almost as old as the Internet itself. The overwhelming majority of the deployed LANs are Ethernet. IEEE 802, a branch of the International Institute of Electrical and Electronics Engineers (IEEE), is responsible for most of the LAN standards. These standards have also been adopted by other standards organization such as ANSI and ISO. The major LAN standards are listed in Table 8-1. • Okhravi et al., *Data Diodes in Support of Trustworthy Cyber Infrastructure*

				• Vorontsove et al., *Development of unidirectional data diode system in the secure environment*, Workshop on computer science and information technologies 19th CSIT 2017, Germany, Baden- Baden, 2017 • U.S. Patent No. 6,081,907 to Witty et al. (Data Delivery System and Method for Delivering Data And Redundant Information Over a Unidirectional Network) • Declaration of Kyriakakis dated June 1, 2021 (Case No. 6:20-cv-00881-ADA, Dkt 64-12) • *See also* "local area network" below.

U.S. Patent No. 9,967,615 ("the '615 patent")

Claim Term	Proposed By	Google Proposed Construction	Specification and Prosecution History	Extrinsic Support
"local playback queue on the particular playback device" (Claims 13, 20-21, 25)	Google	A data structure stored within the particular playback device that maintains an ordered list of two or more multimedia items for playback in the listed order	'615 patent, 12:31-67; 16:20-31; 16:52-62; 16:62-17:4; Figs. 4, 7, 9-11.	• Google may introduce expert testimony from Dr. Kyriakakis regarding the ordinary meaning of this term to a person of ordinary skill in the art in the context of the intrinsic record, including the opinion that Google's proposed construction is consistent with that meaning. • Sonos 2014 provisional application 62/007,906 • U.S. Patent No. 9,674,587 e.g. at 2:52-67, 14:4-16:47, Fig. 4 • Microsoft Computer Dictionary, 5th Edition (2002) **queue**[1] *n.* A multi-element data structure from which (by strict definition) elements can be removed only in the same order in which they were inserted; that is, it follows a first in, first out (FIFO) constraint. There are also several types of queues in which removal is based on factors other than order of insertion—for example, some priority value assigned to each element. *See also* deque, element (definition 1). *Compare* stack. • Webster's New World Telecom Dictionary (2008)

				queue A list, string, or stack of things constructed so that items are added to one end and relieved from one end or the other. Generally speaking, items are added to one end, known as the tail, and relieved from the other end, known as the head. In the absence of some priority mechanism for purposes of establishing and maintaining quality-of-service (QoS) differentiation, items are relieved from the head of the queue in the order they entered the tail. This approach is known as *first-in-first-out* (FIFO). Incoming call centers employ automatic call distributors (ACDs) that queue incoming calls, serving them to agents as they become available. Fax servers can queue documents for transmission during non-prime time hours, when international calling costs are lowest. PBX systems commonly have the capability to queue outgoing calls for expensive long distance circuits. Switches and routers queue packets in buffers until internal resources **queue** 40 are available to process them or until bandwidth is available to forward them. Systems may support mul ple queues for different types of calls or packets. Priority mechanisms can cause a call or packet to mo up in the queue or even advance to the head of the queue in order that it can be served more quickly. S • The New Penguin Dictionary of Computing by Pountain (2001) **queue** A data structure with the property that the first element that can be removed is the first one that was put in. Hence a queue enables a number of items to wait for the occurrence of an event, or access to a rationed resource, while maintaining the strict order in which they arrived. See also FIFO, STACK. • Microsoft Encyclopedia of Networking (2000)

				queue A collection of items waiting to be processed in a specific order. Examples of queues in computer and networking technology are numerous and include the following: • A print queue, which consists of print jobs waiting to be sent to a print device • A messaging queue (on a mail server such as Microsoft Exchange Server), which consists of messages waiting to be sent • A backlog of packets waiting to be forwarded over a specific interface by a router • Information, function calls, or transactions sent by one application and forwarded to another by Microsoft Message Queue (MSMQ) Server in Microsoft Windows NT or Message Queuing in Windows 2000 • A collection of fax messages waiting to be processed and sent by a fax server • A series of system messages, such as key presses and mouse clicks, sent by applications to an operating system for processing • McGraw-Hill Dictionary of Scientific and Technical Terms, 6th Ed. (2002) **queue** [COMPUT SCI] **1.** A list of items waiting for attention in a computer system, generally ordered according to some criteria. **2.** A linear list whose elements are inserted and deleted in a first-in-first-out order. [IND ENG] *See* waiting line. { kyü }
"resource locators" (Claims 13, 16, 25)	Google	"address of a resource on the Internet"	'615 patent, 11:65-12:3, 12:53-61, 14:44-53, 14:62-15:17, 15:37-46, Claims 16, 20	• Google may introduce expert testimony from Dr. Kyriakakis regarding the ordinary meaning of this term to a person of ordinary skill in the art in the context of the intrinsic record, including the opinion that Google's proposed construction is consistent with that meaning. • Microsoft Computer Dictionary, Fifth Edition (2002)

				URL *n.* Acronym for **U**niform **R**esource **L**ocator. An address for a resource on the Internet. URLs are used by Web browsers to locate Internet resources. A URL specifies the protocol to be used in accessing the resource (such as http: for a World Wide Web page or ftp: for an FTP site), the name of the server on which the resource resides (such as //www.whitehouse.gov), and, optionally, the path to a resource (such as an HTML document or a file on that server). *See also* FTP[1] (definition 1), HTML, HTTP, path (definition 1), server (definition 2), virtual path (definition 1), Web browser. • A Dictionary of Computing, Sixth Edition (2008) **URL** (*or* **url**) *Abbrev. for* universal (or uniform) resource locator. The address system used on the Internet, for example, to specify the location of documents in the *World Wide Web. For instance, http://www.eit.com/web/www.guide/ 533 is the URL of a starting point for new Web users. *See also* URI. • Wiley Electrical and Electronics Engineering Dictionary, IEEE Press, 2004. URL Abbreviation of Uniform Resource Locator, or Universal Resource Locator. An Internet address which directs a browser to a specific location where an Internet resource, such as a Web page or document, is located. For example in the following URL, *http://www.yipeeee.com/whoo.html*, http is the protocol, the ***www.yipeeee.com*** portion is the domain name, and ***whoo.html*** is a document named *whoo* created utilizing HTML.
"media particular	Google	Indefinite	N/A	Declaration of Kyriakakis dated June 1, 2021 (Case No. 6:20-cv-00881-

playback system" (Claim 15)[3]				ADA, Dkt 64-12)
"playback device"	Sonos	Plain and ordinary meaning; no construction necessary at this time	*See* '033 above	*See* '033 above
"local area network"	Sonos	Plain and ordinary meaning; no construction necessary at this time	'615 at 7:37-50; 10:56-11:5; 16:1-8; 2:51-3:13; 12:19-43; 13:41-59; 15:38-46; 17:12-20	• Dictionary of Multimedia Terms and Acronyms, 4th Edition (2005) **local area network** (LAN) (n.) Any physical network technology that operates at high speeds over short distances, such as several thousand yards. Technologies that play roles in a LAN include Ethernet, token ring, Asynchronous Transfer Mode (ATM), Fiber Distributed Data Interface (FDDI) II, 10BASE-T, and Systems Network Architecture (SNA). The system of cables and interfaces controlled by a communications protocol that connects microcomputers for sharing resources and peripherals is all part of the LAN. Connection is also possible with an infrared or wireless link. Compare *wide area network*. • Webster's New World Computer Dictionary, 10th Edition (2003)

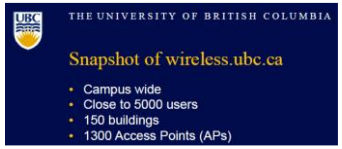
[3] This term was found indefinite prior to transfer. By including this term, Google does not agree that the prior construction should be the subject of reconsideration.

				LAN Acronym for local area network. A computer network that uses cables or radio signals to link two or more computers within a geographically limited area (generally one building or a group of buildings). The linked computers are called workstations. LANs are differentiated by their architecture (peer-to-peer or client/server), topology (bus, hierarchical, multipoint, point-to-point, ring, or star), protocols (standards for transferring data among the linked workstations), and media (for instance, coaxial, twisted-pair, and fiber optic). Peer-to-peer LANs are simple to implement using the built-in networking capabilities of computers running Microsoft Windows or Mac OS; such networks enable the linked computers to share expensive peripherals such as laser printers; client/server networks use a LAN server to make centralized resources (such as databases and applications) available to workstation users. Network protocols operate at differing layers; for example, Ethernet is a lower-layer protocol that defines the basic mechanisms by which data enters the network and travels to its destination; Ethernets can work with a variety of higher-level protocols, including AppleTalk, Common Internet File System (CIFS), and TCP/IP. See *AppleTalk*, *baseband*, *broadband*, *bus network*, *client/server*, *Ethernet*, *peer-to-peer network*, *ring network*, *star network*, *wireless LAN*. • **Webster's New World Dictionary of Computer Terms, Eighth Edition (2000)** **LAN** Acronym for local area network. A computer network that physically links two or more computers within a geographically limited area (generally one building or a group of buildings). The linked computers are called workstations. Peer-to-peer LANs enable the linked computers to share expensive peripherals such as laser printers; client/server networks use a LAN server to make resources (such as databases and applications) available to workstation users. Local area networks have a characteristic topology (such as bus, ring, or star) and implement

				one or more networking protocols (such as AppleTalk, Ethernet, or TCP/IP). See *AppleTalk*, *baseband*, *broadband*, *bus network*, *client/server*, *Ethernet*, *multiuser system*, *NetWare*, *network operating system (NOS)*, *peer-to-peer network*, *ring network*, and *star network*. • **Comprehensive Dictionary of Electrical Engineering, Second Edition (2005)** **local area network** a network of computers and connection devices (such as switches and routers) that are located on a single site. The connections are direct cables (such as UTP or optical fiber) rather than telecommunication lines. The computer network in a university campus is typically a local area network. • **Newton's Telecom Dictionary, Nineteenth Edition (2003)** **Local Area Network** LAN. A short distance data communications network (typically within a building or campus) used to link computers and peripheral devices (such as printers, CD-ROMs, modems) under some form of standard control. Older data communications networks used dumb terminals (devices with no computing power) to talk to distant computers. But the economics of computing changed with the invention of the personal computer which had "intelligence" and which was cheap. LANs were invented as an afterthought — after PCs — and were originally designed to let cheap PCs share peripherals — like laser printers — which were too expensive to dedicate to individual PCs. And as time went on, what LANs were used for got broader and broader. Today, LANs have four main advantages: 1. Anyone on the LAN can use any of the peripheral devices connected to the LAN. 2. Anyone on the LAN can access databases and programs running on client servers (super powerful PCs) attached to the LAN; and 3. Anyone on the LAN can send messages to and work jointly with others on the LAN. 4. While a LAN does not use common carrier circuits, it may have gateways and/or bridges to public telecommunications networks. See LAN Manager, Token Ring and Ethernet. • **The Dictionary of Multimedia, Fourth Edition (2005)**

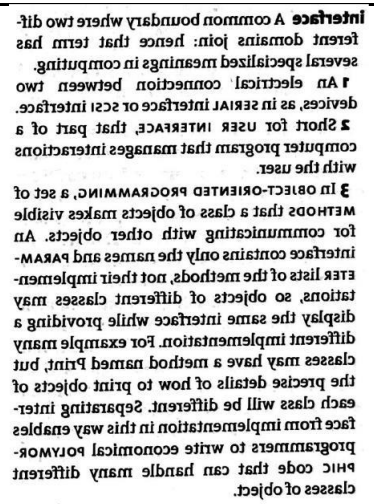
				local area network (LAN) (n.) Any physical network technology that operates at high speeds over short distances, such as several thousand yards. Technologies that play roles in a LAN include Ethernet, token ring, Asynchronous Transfer Mode (ATM), Fiber Distributed Data Interface (FDDI) II, 10BASE-T, and Systems Network Architecture (SNA). The system of cables and interfaces controlled by a communications protocol that connects microcomputers for sharing resources and peripherals is all part of the LAN. Connection is also possible with an infrared or wireless link. Compare *wide area network*. • **IEEE Standard for Local and Metropolitan Area Networks, Std. 802-2001 (2002)** 1.2 Key concepts The LANs described herein are distinguished from other types of data networks in that they are optimized f a moderate-sized geographic area, such as a single office building, a warehouse, or a campus. An IEEE 802 LAN is a peer-to-peer communication network that enables stations to communicate directly on point-to-point, or point-to-multipoint, basis without requiring them to communicate with any intermedia switching nodes. LAN communication takes place at moderate-to-high data rates, and with short trans delays, on the order of a few milliseconds or less. • **Microsoft Computer Dictionary, Fifth Edition (2002)**

				LAN *n.* Acronym for **local area network**. A group of computers and other devices dispersed over a relatively limited area and connected by a communications link that enables any device to interact with any other on the network. LANs commonly include PCs and shared resources such as laser printers and large hard disks. The devices on a LAN are known as nodes, and the nodes are connected by cables through which messages are transmitted. *See also* baseband network, broadband network, bus network, client/server architecture, collision detection, communications protocol, contention, CSMA/CD, network, peer-to-peer architecture, ring network, star network. *Compare* WAN. • **Computer & Internet Dictionary, Third Edition (1999)** **local-area network** A computer network that spans a relatively small area. Most LANs are confined to a single building or group of buildings. However, one LAN can be connected to other LANs over any distance via telephone lines and radio waves. A system of LANs connected in this way is called a *wide-area network (WAN)*. Most LANs connect workstations and personal computers. Each *node*

				(individual computer) in a LAN has its own CPU with which it executes programs, but it is also able to access data and devices anywhere on the LAN. This means that many users can share expensive devices, such as laser printers, as well as data. Users can also use the LAN to communicate with one another, by sending e-mail or engaging in chat sessions. There are many different types of LANs, *Ethernets* being the most common for PCs. Most Apple Macintosh networks are based on Apple's AppleTalk network system, which is built into Macintosh computers. The following characteristics differentiate one LAN from another: **topology:** The geometric arrangement of devices on the network. For example, devices can be arranged in a ring or in a straight line. **protocols:** The rules and encoding specifications for sending data. The protocols also determine whether the network uses a peer-to-peer or client/server architecture. **media:** Devices can be connected by twisted-pair wire, coaxial cables, or fiber optic cables. Some networks do without connecting media altogether, communicating instead via radio waves. LANs are capable of transmitting data at very fast rates, much faster than data can be transmitted over a telephone line; but the distances are limited, and there is also a limit on the number of computers that can be attached to a single LAN. ⇒ See also APPLETALK; ARCNET; BRIDGE; CLIENT/SERVER ARCHITECTURE; DCC; E-MAIL; ETHERNET; IEEE 802 STANDARDS; INTERNETWORKING; MAN; NETWARE; NETWORK; NETWORK INTERFACE CARD; NETWORK OPERATING SYSTEM; NODE; NOVELL; PEER-TO-PEER ARCHITECTURE; PERSONAL COMPUTER; PROTOCOL; SNMP; SWITCHING HUB; TOKEN BUS NETWORK; TOKEN-RING NETWORK; TOPOLOGY; TOPS; VLAN; WIDE-AREA NETWORK. • ***Deploying the World's Largest Campus 802.11b Network*, University of British Columbia** (November 11, 2003; available at http://www.ieee802.org/802_tutorials/03-6November/www.wireless.ubc.ca-IEEE-Nov2003.ppt)  *See also* "data network"
"network interface"	Sonos	Plain and ordinary meaning; no	'615 at 7:23-8:39; 9:49-59	• Dictionary of Computing, 6th edition (2010)

		construction necessary at this time		**network** /'netwɜ:k/ *noun* a system made of a number of points or circuits that are interconnected ■ *verb* to link points together in a network ○ *They run a system of networked micros.* 'Asante Technologies has expanded its range of Ethernet-to-LocalTalk converters with the release of AsantePrint 8, which connects up to eight LocalTalk printers, or other LocalTalk devices, to a high-speed Ethernet network.' [*Computing*] • The Computer Glossary, The Complete Illustrated Dictionary, 9th Edition (2001) **network** (1) An arrangement of objects that are interconnected. See *LAN*. (2) In communications, the transmission channels interconnecting all client and server stations as well as all supporting hardware and software. • Dictionary of Multimedia Terms and Acronyms, 4th Edition (2005) **network** (n.) A group of computers, peripherals, or other equipment connected to one another for the purpose of passing information and sharing resources. Networks can be local or remote. The topology of a network is the geographic arrangement of links and nodes, which may be arranged in the shape of a star, a tree, or a ring. • Dictionary of Computer and Internet Words (2001) **interface** 1. The devices, graphics, commands, and prompts that enable a computer to communicate with any other entity, such as a printer or the user. For example, the ports and connector are the interface between a computer and a printer. The interface that lets a user communicate with the computer is called a user interface. *See also* **user interface.** 2. *See* **port.**

				• Dictionary of Computer and Internet Terms, 8th Ed. (2003) **interface** the connection between two systems through which inform tion is exchanged. For example, in computer hardware, an interface an electrical connection of the proper type. In software, it is a standa format for exchanging data. The USER INTERFACE of a piece of softwa is the way it interacts with the human being who is using it. *See al* DATA COMMUNICATION; USER INTERFACE. • Computer and Internet Dictionary, 3rd Ed. (1999) **interface** *n* **1.** Something that connects two separate entities. For examp a *user interface* is the part of a program that connects the computer wi a human operator (user). There are also interfaces to connect programs, to connect devices, an to connect programs to devices. An interface can be a program or a de vice, such as an electrical connector. —*v* **2.** To communicate. For exam ple, two devices that can transmit data between each other are said to *terface with each other*. This use of the term is scorned by language purists because *interface* has historically been used as a noun. • Dictionary of Computer Science, Engineering, and Technology by Laplante (2001) **interface** (1) the boundary between a system and its environment, across which interaction occurs by the passing of information. (2) the externally visible features or charac teristics (of an object, use case, subroutine, etc.). This term is used in the languages supporting the distinction between interfaces and classes such as C++. • The New Penguin Dictionary of Computing by Pountain (2001)



interface A common boundary where two different domains join; hence that term has several specialized meanings in computing.
1 An electrical connection between two devices, as in SERIAL interface or SCSI interface.
2 Short for USER INTERFACE, that part of a computer program that manages interactions with the user.
3 In OBJECT-ORIENTED PROGRAMMING, a set of METHODS that a class of objects makes visible for communicating with other objects. An interface contains only the names and PARAMETER lists of the methods, not their implementations, so objects of different classes may display the same interface while providing a different implementation. For example many classes may have a method named Print, but the precise details of how to print objects of each class will be different. Separating interface from implementation in this way enables programmers to write economical POLYMORPHIC code that can handle many different classes of object.

- Data Telecommunications Dictionary by Peterson (1999)

interface A hardware connection, or logical connection or translation point. Interfaces are an intrinsic part of interconnected computers, peripherals, and networks. Almost every aspect of data and electrical connections in the telecommunications industry uses a different format or version of a format, and the interface is the point at which all these different hardware and software junctions come together. A cable, peripheral card, card slot, or chip socket are all types of interfaces, as are the images on the monitor and the sounds from a speaker.

- Understanding Networking Technology, 2nd Ed. (1999)

Interface ..... The boundary between two things, typically two programs, two pieces of hardware, a computer and its user, and a project manager and the customer.

"a media particular playback system"	Sonos	operation that controls a playback related function	Indefinite	Declaration of Kyriakakis dated June 1, 2021 (Case No. 6:20-cv-00881-ADA, Dkt 64-12)

U.S. Patent No. 10,848,885("the '885 patent")

Claim Term	Proposed By	Google Proposed Construction	Specification and Prosecution History	Extrinsic Support
"zone scene" (all asserted claims)	Google	zone: an area or areas with one or more playback devices zone scene: a group of two or more zones that are grouped according to a common theme by configuring the zones in a particular scene (e.g., morning, afternoon or garden)	'206 Patent, Reasons for Allowance, '966 Patent, Reasons for Allowance; see also '885 Patent Reasons for Allowance. '966 Patent, 2019-08-23 OA Response, e.g. at 18. '206 Patent, 8:19-42, 8:56-9:3, claim 8, Figs. 5A-C, 6. '206 Provisional App. at 13; 2:22-37.	• Declaration of Kyriakakis dated June 1, 2021 (Case No. 6:20-cv-00881-ADA, Dkt 64-12) • Google may introduce expert testimony from Dr. Kyriakakis regarding the ordinary meaning of this term to a person of ordinary skill in the art in the context of the intrinsic record, including the opinion that Google's proposed construction is consistent with that meaning. • Hargrave's Communications Dictionary (2001) **zone (1)** In an internetwork, a subset of nodes which, together, form a logical subdivision. A node can be part of one or more *zones*. A *zone* can encompass multiple networks and can cross network boundaries. (That is, it can apply to parts of several networks.) A *zone* may have a name associated with it that is used to simplify routing and service advertising. **(2)** In AppleTalk. A logical subset of nodes which together form a subdivision. It can have an associated name, and a node can be part of one or more zones. The zone name is used to simplify routing and service advertising. A zone can encompass multiple networks and can cross network boundaries (that is, apply to parts of several networks).
"zone player"	Sonos	Plain and ordinary meaning; no construction necessary at this time	'966 at 8:52-61; 5:57-6:8; 9:15-35	• Google may introduce expert testimony from Dr. Kyriakakis regarding the ordinary meaning of this term to a person of ordinary skill in the art in the context of the intrinsic record, including the opinion that Google's proposed construction is consistent with that meaning. • *See above* for "zone scene"

"data network"	Sonos	Plain and ordinary meaning; no construction necessary at this time	*See* '033 above	*See* '033 above

U.S. Patent No. 10,469,966 ("the '966 patent")

Claim Term	Proposed By	Google Proposed Construction	Specification and Prosecution History	Extrinsic Support
"zone scene" (all asserted claims)	Google	A previously saved grouping of zone players according to a common theme	*See* '885 above	*See* '885 above
"zone player"	Sonos	Plain and ordinary meaning; no construction necessary at this time	*See* '885 above	*See* '885 above

U.S. Patent No. 9,344,206 ("the '206 patent")

Claim Term	Proposed By	Google Proposed Construction	Specification and Prosecution History	Extrinsic Support
"zone configuration" / "group configuration" (all asserted claims)	Google	Indefinite	'966 at 8:52-61; 5:43-6:8; 9:15-35; Claim 1.	• Declaration of Kyriakakis dated June 1, 2021 (Case No. 6:20-cv-00881-ADA, Dkt 64-12) • *See above* for "zone scene"

Dated: January 10, 2022

QUINN EMANUEL URQUHART & SULLIVAN, LLP

By: /s/ *Charles K. Verhoeven*

Charles K. Verhoeven (pro hac vice)
charlesverhoeven@quinnemanuel.com
Melissa Baily (pro hac vice)
melissabaily@quinnemanuel.com
Lindsay Cooper (pro hac vice)
lindsaycooper@quinnemanuel.com
QUINN EMANUEL URQUHART & SULLIVAN LLP
50 California Street, 22nd Floor
San Francisco, California 94111-4788
Telephone: (415) 875 6600
Facsimile: (415) 875 6700

Counsel for Defendant Google LLC

CERTIFICATE OF SERVICE

I certify that a true and correct copy of the above and foregoing document was served on counsel for plaintiff Sonos, Inc. via electronic delivery on January 10, 2022.

/s/ Nima Hefazi
Nima Hefazi